

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A vacuum apparatus comprising:
a vacuum container having ~~a gas inlet and~~ a gas outlet;
a high vacuum pump connected to said gas outlet of said vacuum container, wherein said high vacuum pump is configured to operate in a molecular flow region and depressurize the inside of said vacuum container or maintain the inside of said vacuum container in a depressurized state;
a vacuum pump of at least one stage connected to a gas outlet of said high vacuum pump;
and
a compressor connected to a discharge port of a last-stage ~~vacuum pump of said at least one stage vacuum pump of the vacuum pump of at least one stage~~ without divergence, wherein said compressor is configured to aspirate all of gases from the last-stage vacuum pump ~~[[and]], to depressurize an input side of said compressor and to pressurize an output side of said compressor to more than the atmospheric pressure;~~
wherein during operation the last-stage vacuum pump has an inlet pressure of 10 Torr or less.
2. (Currently Amended) A vacuum apparatus according to claim 1, wherein ~~the vacuum pump of at least one stage is a single-stage vacuum pump the number of vacuum pump stages is set to one stage or a plurality of stages depending on a gas amount introduced into said vacuum container.~~
3. (Currently Amended) A vacuum apparatus according to claim 1, wherein ~~the vacuum pump of at least one stage has multiple stages the number of vacuum pump stages is set to the plurality of stages.~~

4. (Previously Presented) A vacuum apparatus according to any one of claims 1 to 3, further comprising a gas recovery apparatus configured to recover a gas discharged from said last-stage vacuum pump for re-use of said gas, wherein said compressor serves as said gas recovery apparatus.

5. (Currently Amended) A vacuum apparatus comprising:
a vacuum container to be depressurized having ~~a gas inlet and~~ a gas outlet;
a high vacuum pump connected to said gas outlet of said vacuum container, wherein said high vacuum pump is configured to operate in a molecular flow region and depressurize the inside of said vacuum container or maintain the inside of said vacuum container in a depressurized state;

vacuum pumps of a plurality of stages connected to said high vacuum pump; and
a gas recovery apparatus configured to recover a gas discharged from a last-stage vacuum pump of said vacuum pumps for re-use of said gas;
wherein:

said vacuum apparatus further comprises a gas recovery compressor, connected to a discharge port of said last-stage vacuum pump without divergence, wherein said compressor is configured to aspirate all of gases from the last-stage vacuum pump and assist a depressurization operation of said last-stage vacuum pump and a pressurization operation of an output side of said compressor to more than the atmospheric pressure and suppressing back diffusion from said discharge port, and

said gas recovery compressor serves as said gas recovery apparatus;
wherein during operation the last-stage vacuum pump has an inlet pressure of 10 Torr or less.

6. (Cancelled).

7. (Currently Amended) A vacuum apparatus comprising:
a container to be depressurized having ~~a gas inlet and a~~ gas outlet;
a first vacuum pump configured to operate in a molecular flow region and maintain the inside of said container to be depressurized;
a second vacuum pump connected at a subsequent stage of said first vacuum pump;
a third vacuum pump connected at a subsequent stage of said second vacuum pump; and
a compressor connected to said third vacuum pump without divergence, wherein the compressor is configured to aspirate all of gases from the third vacuum pump, to depressurize an input side of said compressor and to pressurize an output side of said compressor to more than the atmospheric pressure;

wherein during operation said third vacuum pump has an inlet pressure of 10 Torr or less.

8. (Original) A vacuum apparatus according to claim 7, wherein said first vacuum pump is a turbomolecular pump or a thread groove pump, and said second vacuum pump is a booster pump, said third vacuum pump being a dry pump.

9. (Previously Presented) A vacuum apparatus according to claim 7 or 8, further comprising a gas recovery apparatus configured to recover a gas discharged from said third vacuum pump for re-use of said gas, wherein said compressor serves as said gas recovery apparatus.

10. (Currently Amended) A vacuum apparatus comprising:
a container to be depressurized having ~~a gas inlet and a~~ gas outlet and introduced with a gas in a supply amount smaller than a predetermined amount;
a first vacuum pump configured to operate in a molecular flow region and maintain the inside of said container to be depressurized;
a second vacuum pump connected at a subsequent stage of said first vacuum pump; and

a compressor connected to said second vacuum pump without divergence, wherein the compressor is configured to aspirate all of gases from the second vacuum pump, to depressurize an input side of said compressor and to pressurize an output side of said compressor to more than the atmospheric pressure;

wherein during operation the second vacuum pump has an inlet pressure of 10 Torr or less.

11. (Original) A vacuum apparatus according to claim 10, wherein said first vacuum pump is a turbomolecular pump or a thread groove pump, and said second vacuum pump is a booster pump.

12. (Previously Presented) A vacuum apparatus according to claim 10 or 11, further comprising a gas recovery apparatus configured to recover a gas discharged from said second vacuum pump for re-use of said gas, wherein said compressor serves as said gas recovery apparatus.

13. (Previously Presented) A vacuum apparatus according to any one of claims 1, 5, 7 or 10, wherein the vacuum pump connected to said compressor is a screw pump.

14. (Cancelled).